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Since the preparative process may be repeated, one could prepare a plurality of solid substrates, where the same agents are prepared at the comparable sites, so that the screening could be repeated with the same or different cells to determine the activity of the individual agents. In some instances, the identity of the agent can be determined by a nucleic acid tag, using the polymerase chain reaction for amplification of the tag. (See, e.g., PCT Application No. WO93/20242.) In this instance, the agents that are active may be determined by taking the lysate and introducing the lysate into a polymerase chain reaction medium comprising primers specific for the nucleic acid tag. Upon expansion, one can sequence the nucleic acid tag or determine its sequence by other means, which will direct the selection of the procedure is used to prepare the agent.

Alternatively, one may have tagged particles where the tags are releasable from the particle and provide a binary code that describes the synthetic procedure for the agents bound to the particle. (See, e.g., Ohlmeyer, et al. (1993) PNAS 90:10922.) These tags can conveniently be a homologous series of alkylene agents, which can be detected by gas chromatography-electron capture. Depending upon the nature of the linking group, one may provide for partial release from the particles, so that the particles may be used two or three times before identifying the particular agent.

While for the most part libraries have been discussed, any large group of agents can be screened analogously, so long as a BMP-1 related protein epitope or laminin 5 epitope can be joined to each of the agents. Thus, agents from different sources, both natural and synthetic, including macrolides, oligopeptides, ribonucleic acids, dendrimers, etc., may also be screened in an analogous manner.

The following examples explain the invention in more detail. The following preparations and examples are given to enable those skilled in the art to more clearly understand and to practice the present invention. The present invention, however, is not limited in scope by the exemplified embodiments, which are intended as illustrations of single aspects of the invention only, and methods which are functionally equivalent are within the scope of the invention. Indeed, various modifications of the invention in addition to those described herein will become apparent to those skilled in the art from the foregoing description and accompanying drawings. Such modifications are intended to fall within the scope of the appended claims.

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EXAMPLES

Unless otherwise stated, the following materials and methods were used in the examples of the present invention. The following GenBank Accession numbers are provided for BMP-1 related polynucleotides and polypeptides: human BMP-1 polynucleotide (GenBank Accession No. M22488); human BMP-1 polypeptide (GenBank Accession No. AAA51833); human mTld polynucleotide (GenBank Accession No. U91963); human mTld polypeptide (GenBank Accession No. AAB93878); human mTll-1 polynucleotide (GenBank Accession No. NM_012464); human mTll-1 polypeptide (GenBank Accession No. NP_036596); human mTll-2 polynucleotide (GenBank Accession No. NM_012465); human mTll-2 polypeptide (GenBank Accession No. NP_036597). Each of these GenBank references is incorporated herein by reference in its entirety.

30 Example 1: Assay for Laminin 5 Processing Activity

A comparative analysis of the abilities of BMP-1 and MMP-2 to process the α3 chain of laminin 5 was performed. Laminin 5 was obtained as described in Marinkovich et al., (1992) J. Biol. Chem. 267:17900-17906. A digestion of approximately 1 μg of laminin 5 with 30 ng/ml BMP-1 for 16 hours at 37°C